

## ABSTRACT

A float shoe/collar apparatus and method is disclosed for multi-purpose use in running a tubular string such as a casing string or liner into a wellbore and for optimizing cementing operations. In one presently preferred embodiment, the present invention apparatus permits auto filling of the tubular string as the string is lowered into the wellbore. If desired, circulation Circulation can be effected through down jets for washing the wellbore as necessary. After the tubular string is positioned, the down jets can be blocked off and up jets opened to thereby direct cement upwardly to optimize cement placement. Check valves can also be activated in accord with the present invention to prevent flow from the wellbore into the tubular string. In one embodiment, the invention apparatus comprises an inner member and tubular member. The inner member is movable upon release of shear pins to cause longitudinal movement relative to the outer member. The movement of the inner member may close a plurality of downward jets and may also open a plurality of upward jets, if desired. The apparatus may also be equipped with a set of check valves which can be held open on run in, and subsequently activated to thereby automatically close upon cementing to prevent "u-tubing" of fluid back into the casing. In another embodiment a float collar comprises the same valve/valves as the float shoe, without jets. This float collar may be run in conjunction with a guide shoe, with or without jets.